IN THE CLAIMS

Please cancel claims 1-8 and add new claims 9-25.

9. A piezoelectric actuator comprising a housing (10), in which at least one piezoelectric element (2; 21; 31; 41; 42) for subjecting an actuating element to a tensile force or compressive force is disposed and is guided longitudinally movably by means of a flexible intermediate layer (11), and

stabilizing elements (9, 22), disposed parallel to this piezoelectric element (2; 21; 31; 41, 42), to prevent bending tensions in the piezoelectric element (2; 21; 31; 41; 42) said intermediate layer (11) being located between the piezoelectric element (2; 21; 31; 41; 42) and the stabilizing elements (9, 22),

the ratio of the length of the piezoelectric element (2; 21; 31; 41; 42) and the stabilizing elements (9, 22) in the effective direction (Z axis) to the width transversely to the effective direction (X, Y direction) is from 5:1 to 50:1.

10. The piezoelectric actuator of claim 9, wherein

the stabilizing elements (9) are of steel and are held between a base or support plate (8) fastened firmly in the housing (10) of the piezoelectric actuator (1) and a fixation edge in the housing (10), and wherein the piezoelectric element (2; 21; 31; 41; 42) is held between the base plate (8) and a spring plate (7) which, via a prestressing spring (6), likewise rests on the housing (10) and guides the actuating element.

11. The piezoelectric actuator of claim 9, wherein

the piezoelectric element (21; 31) and the stabilizing elements (22) are of ceramic materials, which have essentially the same coefficients of temperature expansion, and the stabilizing elements (22) are held between a base or support plate (8) and a fixation edge in the housing (10),

wherein the piezoelectric element (21; 31) is held between the base plate (8) and a spring plate (7), which via a prestressing spring (6) likewise rests on the housing (10) and guides the actuating element,

and wherein the stabilizing element (22) is coupled mechanically with the piezoelectric element (21; 31) in such a way that the temperature-dictated expansions of the piezoelectric element (21; 31) and of the stabilizing element (22) cancel one another out in the effective direction in such a way that the actuating element remains in its position.

12. The piezoelectric actuator of claim 11, wherein

the base plate (8) rests on the housing (10) via a spring (23).

13. The piezoelectric actuator of claim 10, wherein

the piezoelectric element (21) is constructed of transversely stacked piezoelectric layers and thus exerts a compressive force on the actuating element.

14. The piezoelectric actuator of claim 11, wherein

the piezoelectric element (21) is constructed of transversely stacked piezoelectric layers and thus exerts a compressive force on the actuating element.

15. The piezoelectric actuator of claim 12, wherein

the piezoelectric element (21) is constructed of transversely stacked piezoelectric layers and thus exerts a compressive force on the actuating element.

16. The piezoelectric actuator of claim 10, wherein

the piezoelectric element (21) is constructed of longitudinally stacked piezoelectric layers and thus exerts a tensile force on the actuating element.

17. The piezoelectric actuator of claim 11, wherein

the piezoelectric element (21) is constructed of longitudinally stacked piezoelectric layers and thus exerts a tensile force on the actuating element.

18. The piezoelectric actuator of claim 12, wherein

the piezoelectric element (21) is constructed of longitudinally stacked piezoelectric layers and thus exerts a tensile force on the actuating element.

19. The piezoelectric actuator of claim 13, wherein

A12 cont.

the stabilizing elements (22) comprise piezoelectric layers, each located perpendicular to the layered structure of the piezoelectric element (21; 31), which piezoelectric layers are triggered with a voltage in the same way as the piezoelectric element (21; 31).

20. The piezoelectric actuator of claim 14, wherein

the stabilizing elements (22) comprise piezoelectric layers, each located perpendicular to the layered structure of the piezoelectric element (21; 31), which piezoelectric layers are triggered with a voltage in the same way as the piezoelectric element (21; 31).

21. The piezoelectric actuator of claim 15, wherein

the stabilizing elements (22) comprise piezoelectric layers, each located perpendicular to the layered structure of the piezoelectric element (21; 31), which

piezoelectric layers are triggered with a voltage in the same way as the piezoelectric element (21; 31).

22. The piezoelectric actuator of claim 16, wherein

the stabilizing elements (22) comprise piezoelectric layers, each located perpendicular to the layered structure of the piezoelectric element (21; 31), which piezoelectric layers are triggered with a voltage in the same way as the piezoelectric element (21; 31).

A12 cont.

23. The piezoelectric actuator of claim 17, wherein

the stabilizing elements (22) comprise piezoelectric layers, each located perpendicular to the layered structure of the piezoelectric element (21; 31), which piezoelectric layers are triggered with a voltage in the same way as the piezoelectric element (21; 31).

24. The piezoelectric actuator of claim 18, wherein

the stabilizing elements (22) comprise piezoelectric layers, each located perpendicular to the layered structure of the piezoelectric element (21; 31), which piezoelectric layers are triggered with a voltage in the same way as the piezoelectric element (21; 31).

25. The piezoelectric actuator of claim 9, wherein

two piezoelectric elements (41, 42) are disposed symmetrically to a tension rod (43), acting as the actuating element, surrounded by the intermediate layer (41) in the housing (10) of the piezoelectric actuator (40), and wherein the piezoelectric elements (41, 42) are held between a support plate (44), connected to the tension rod (43), and a fixation edge in the housing (10), and wherein the support plate (44) rests on the housing (10) via a spring (23).